

NAG Toolbox for Matlab

e05jj

1 Purpose

e05jj is used to get the value of an ‘ON’/‘OFF’-valued character e05jb optional parameter. e05jj can be used before or after calling e05jb, but the initialization function e05ja **must** have been called before calling e05jj.

2 Syntax

```
[cvalue, ifail] = e05jj(optstr, comm)
```

3 Description

e05jj obtains the current value of an ‘ON’/‘OFF’-valued character optional parameter. For example

```
[lcsrch, ifail] = e05jj('Local Searches', comm);
```

will result in the ‘ON’/‘OFF’ value of the optional parameter Local Searches being output in lcsrch.

A complete list of optional parameters, their symbolic names and default values is given in Section 11 in e05jb.

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

1: **optstr** – string

A valid ‘ON’/‘OFF’-valued character optional parameter (as described in Section 11 in e05jb).

2: **comm(lcomm)** – double array

lcomm, the dimension of the array, must satisfy the constraint $lcomm \geq 100$.

Communication data as initialized by e05ja.

5.2 Optional Input Parameters

None.

5.3 Input Parameters Omitted from the MATLAB Interface

lcomm

5.4 Output Parameters

1: **cvalue** – string

If **ifail** = 0 on exit, **cvalue** contains the ‘ON’/‘OFF’ value associated with the keyword in **optstr**.

2: **ifail** – int32 scalar

ifail = 0 unless the function detects an error (see Section 6).

6 Error Indicators and Warnings

Errors or warnings detected by the function:

ifail = 1

On entry, $lcomm < 100$,
or the initialization function e05ja has not been called.

ifail = 2

The optional parameter given in **optstr** is invalid. The correct number of word ‘tokens’ are present but a keyword or keyword combination is invalid.

ifail = 3

The optional parameter given in **optstr** is not associated with an ‘ON’/‘OFF’ value. See Section 11 in e05jb for a full list of the optional parameters.

ifail = 4

The optional-parameter name contained the wrong number of word ‘tokens’, so could not be recognized by the function.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

```
% Initialize e05jb
n = int32(2);
[comm, ifail] = e05ja(n);

if (ifail == 0)
    % See what the default values are for the various options
    nf = e05jk('Function Evaluations Limit', comm)
    infbnd = e05jl('Infinite Bound Size', comm)
    lcsrch = e05jj('Local Searches', comm)
    loclim = e05jk('Local Searches Limit', comm)
    loctol = e05jl('Local Searches Tolerance', comm)
    repeat = e05jj('Repeatability', comm)
    smax = e05jk('Splits Limit', comm)
    stclim = e05jk('Static Limit', comm)
    objerr = e05jl('Target Objective Error', comm)
    objsfsg = e05jl('Target Objective Safeguard', comm)
    objval = e05jl('Target Objective Value', comm)
end

nf =
    400
infbnd =
    1.1579e+77
lcsrch =
    ON
loclim =
    50
loctol =
    2.2204e-16
repeat =
```

```
OFF
smax =      20
stclim =    6
objerr =
  1.0265e-04
objsfgr =
  1.0537e-08
objval =
  0
```
